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1. A mask with sensors for monitoring a patient during gas delivery comprising:  
a mask having a perimeter for contacting the face of a patient,  
at least one sensor on the mask to sense at least one parameter indicating a state of  
the patient,  
leads in the mask connected to the at least one sensor for transmission of data,  
a means for transmitting data from the mask,  
a hose connector on the mask for attachment of a hose for delivery of gas to the  
mask.

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2. A mask with sensors for monitoring a patient during gas delivery as in claim 1  
wherein,  
the means for transmitting data from the mask comprises a mask interface  
connector for connecting the leads in the mask to a cable.

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3. A mask with sensors for monitoring a patient during gas delivery as in claim 1 comprising,  
a means for providing power to the mask to operate the sensors.

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1 4. A mask with sensors for monitoring a patient during gas delivery as in claim 3  
2 wherein,

3 the means for providing power to the mask to operate the sensors comprises a  
4 mask interface connector connecting a power source lead to a lead in the mask for  
5 transmitting power to a sensor and;

6 the means for transmitting data from the mask comprises a mask interface  
7 connector for connecting the leads in the mask to a cable.

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1 5. A mask with sensors for monitoring a patient during gas delivery as in claim 3  
2 wherein,

3 the means for providing power to the mask to operate the sensors comprises a  
4 battery attached to the lead in the mask for transmitting power to a sensor and;

5 the means for transmitting data from the mask comprises a telemetry device.

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1 6. A mask with sensors for monitoring a patient during gas delivery as in claim 1  
2 wherein,

3 the sensors on the mask are selected from the group consisting of, EEG, EMG,  
4 EOG, ECG, PTT, temperature, surface blood pressure, pulse, blood oxygen level, light,  
5 breathing rate, breathing volume, gas flow, nasal air flow, oral air flow, position, activity  
6 sensors, mask leakage, mask pressure, eye movement, microphones, gas pressure, patient  
7 recycled air detection, patient back gas and movement.

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1 7. A mask with sensors for monitoring a patient during gas delivery as in claim 1  
2 wherein,

3 at least one sensor on the perimeter of the mask makes contact with the skin of the  
4 patient for measuring a parameter.

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1 8. A mask with sensors for monitoring a patient during gas delivery as in claim 7  
2 wherein,

3 the perimeter of the mask has a soft pliable material for contacting the face of the  
4 patient.

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1 9. A mask with sensors for monitoring a patient during gas delivery as in claim 8  
2 wherein,

3 the material has at least one recess with a sensor in the recesses for contacting the  
4 skin of the patient.

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1 10. A mask with sensors for monitoring a patient during gas delivery as in claim 9  
2 wherein,

3 leads in the pliable material are connected to the at least one sensor for power and  
4 data connections therewith.

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1 11. A mask with sensors for monitoring a patient during gas delivery as in claim 8  
2 wherein,

3 a carbon embedded rubber material provides electrical contact between the sensor  
4 in the soft pliable material and the patient's skin.

1 12. A mask with sensors for monitoring a patient during gas delivery as in claim 1  
2 wherein,

3 the mask has at least one strap attached to the mask to hold the mask in place.  
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1 13. A mask with sensors for monitoring a patient during gas delivery as in claim 1  
2 wherein,

3 the mask has at least one strap attached to the mask to hold the mask in place and  
4 the strap has at least one sensor wired to the mask for monitoring the patient.  
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1 14. A mask with sensors for monitoring a patient during gas delivery as in claim 1  
2 wherein,

3 the mask has a cap attached to the mask to hold the mask in place.  
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1 15. A mask with sensors for monitoring a patient during gas delivery as in claim 1  
2 wherein,

3 the mask has a cap with at least one sensor attached to the cap, the sensor leads on  
4 the cap connected to the leads in the mask for monitoring the patient.  
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1 16. A mask with sensors for monitoring a patient during gas delivery as in claim 13  
2 wherein,

3 the strap includes a chin strap.  
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1 17. A mask with sensors for monitoring a patient during gas delivery as in claim 1  
2 wherein,

3 at least one sensor in the chin strap for measuring chin EMG  
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1 18. A mask with sensors for monitoring a patient during gas delivery as in claim 13  
2 wherein,

3 the straps include a head strap having a sensor for measuring EEG.  
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1 19. A mask with sensors for monitoring a patient during gas delivery as in claim 15  
2 wherein,

3 the cap includes sensor for measuring EEG.  
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1 20. A mask with sensors for monitoring a patient during gas delivery as in claim 13  
2 wherein,

3 the strap includes an ear strap having an oxygen saturation sensor applied to the  
4 ear of the patient.  
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1 21. A mask with sensors for monitoring a patient during gas delivery as in claim 1  
2 wherein,

3 a thermal sensor on a portion of the mask detects changes in temperature on that  
4 portion of the mask.  
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1 22. A mask with sensors for monitoring a patient during gas delivery as in claim 21  
2 wherein,

3 the mask has a thermally conductive material to which the thermal sensors are  
4 thermally coupled.

1 23. A mask with sensors for monitoring a patient during gas delivery as in claim 1  
2 wherein,

3 a thermally sensitive material on the mask proximate the patient's nose detects  
4 temperature variations for nasal breathing detection.

1 24. A mask with sensors for monitoring a patient during gas delivery as in claim 1  
2 wherein,

3 a thermally sensitive material on the mask proximate the patient's mouth detects  
4 temperature variations for oral breathing detection.

1 25. A mask with sensors for monitoring a patient during gas delivery as in claim 1  
2 wherein,

3 a thermally sensitive material on the mask proximate mask perimeter detects  
4 temperature variations for leak detection.

1 26. A mask with sensors for monitoring a patient during gas delivery as in claim 21  
2 wherein,

3 the thermally sensitive material comprises a thermistor.  
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1 27. A mask with sensors for monitoring a patient during gas delivery as in claim 21  
2 wherein,

3 the thermally sensitive material comprises a thermocouple.  
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1 28. A mask with sensors for monitoring a patient during gas delivery as in claim 21  
2 wherein,

3 the thermally sensitive material comprises a coating on the mask.  
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1 29. A mask with sensors for monitoring a patient during gas delivery as in claim 21  
2 wherein,

3 the thermally sensitive material portion of the mask comprises an internal surface  
4 portion of the mask.  
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1 30. A mask with sensors for monitoring a patient during gas delivery as in claim 21  
2 wherein,

3 the thermally sensitive material portion of the mask comprises an external surface  
4 portion of the mask.  
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1 31. A mask with sensors for monitoring a patient during gas delivery as in claim 21  
2 wherein,

3 the thermally sensitive material portion of the mask comprises a portion within  
4 the mask material.

1 Add  
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